

SCIENCE & GOVERNMENT REPORT

13th Year of Publication

The Independent Bulletin of Science Policy

Volume XIII, Number 18

P.O. Box 6226A, Washington, D.C. 20015

November 1, 1983

GAO Cites Infrequent Audits, Poor Documentation

Study for Congress Hits Indirect-Cost System

A forthcoming report by the General Accounting Office raises serious questions about the growth and documentation of indirect-cost payments that universities receive for research supported by the National Institutes of Health.

The report is confined to management of NIH grants, but since all federal granting agencies operate under the same rules, the GAO study has government-wide relevance. GAO, as is customary, is tightlipped about the report, which is now being distributed to Executive agencies for comment.

A faithful source told SGR that, after examining indirect-cost payments on NIH grants at 82 universities, the GAO investigators concluded that "you got to shake

GAO's fieldwork was conducted in four of the 10 regional offices of the Department of Health and Human Services, NIH's parent agency—Boston, Denver, Atlanta, and Philadelphia. "They didn't look at whether an institution got a fair share," SGR was told. "What they looked for was how the universities are audited and what documentation was provided to explain increases."

The source said that GAO "found little documentation in the files to support the increases. That doesn't mean it doesn't exist," he continued. "They just couldn't find it." He added that "the biggest question mark was in 'departmental administration,'" a category that's increasingly popular with university financial

(Continued on page 2)

British Universities Face New Stringencies—Page 3

your head and wonder what's going on." The source added that, contrary to what GAO had been led to understand, "few universities are annually audited by the federal government," and one sizeable recipient of NIH support "hasn't been audited in a decade."

The GAO is often referred to as Congress's fiscal watchdog; it moves carefully and sometimes so slowly that its findings are bypassed by events, but it is well regarded as a trustworthy servant of Capitol Hill.

The GAO report, tentatively scheduled for release in mid-December, comes at a time when NIH itself is questioning the share that academic administration is taking from funds appropriated for research. Meanwhile, there's restlessness among researchers as administrators of the major research universities continue to stonewall NIH's efforts to moderate the growth of indirect-cost expenditures, which have risen from an average of 21.6 to about 30 percent since 1972 (SGR Vol. XIII, Nos. 15-17).

First requested in 1981 by Senators William Proxmire (D-Wisc.) and Paula Hawkins (R-Fla.), the GAO study was stalled for a time by the illness of a key staff member. It got going again last year when the House Appropriations Committee, traditionally friendly to biomedical research, balked at Administration attempts to cut indirect-cost payments by 10 percent. The Committee led the way for the Congress to rescind the cut, but asked GAO to attempt to clarify the murky picture of indirect-cost computation and accountability.

In Brief

House Speaker Tip O'Neill and Chairman Don Fuqua of the House Science and Technology Committee have quietly agreed to try to end Capitol Hill's increasingly frequent pork-barrel raids for laboratory construction money. O'Neill says that his support for the vanguard of the current crop—special funds for labs at Catholic and Columbia universities—was based on the belief that they had gone through the conventional review process. In fact, they were last-minute floor amendments to bills from an enraged Fuqua's committee (SGR Vol. XIII, No. 10).

House and Senate conferees have settled up on an appropriations bill that gives NIH \$390.5 million more than the Administration requested for the current fiscal year. Splitting the difference in House-Senate versions that were a few millions apart, the conferees agreed on a total of \$4.3 billion, which is \$451 million above last year's budget. Still to come are separately authorized funds for training and a few other items.

Frank Press, President of the National Academy of Sciences (NAS), was scheduled to give a luncheon address at the National Press Club last month—an advantageous forum for attracting notice. But the NAS head, who planned to say the US is about to outrun Japan in high-tech innovation, never got to the podium. Club rules call for a minimum sign-up of 110 lunchers three days before the event. Despite drumbeating by the NAS information apparatus, only 57 had signed up at the deadline.

Policy Analysis Gets New Emphasis at NSF

A recently rejuvenated Policy Research and Analysis Division (PRA) at the National Science Foundation has turned into a busy think tank not only for NSF's management but also for the White House Science Office and the Office of Management and Budget.

In addition, the Division, with a staff of about 20 professionals and a budget of \$4.5 million for grants and contracts, is looking to establish new links with university-based and other policy-analysis groups. At a time when funds are in short supply for policy studies, a recent invitation for interested groups merely to make themselves known to the Division drew 150 responses.

What, if anything, these stirrings amount to amid Washington's unending paper blizzard is difficult to say. But with research, high-tech industry, and science education attracting unprecedented political attention, it is perhaps noteworthy that NSF's once-obscure PRA Division is becoming a service agency on just these issues. A lot of its output is in the form of a quick-response few pages on specific questions, but lengthy and ambitious studies are also in the works.

A longtime fixture that fell into disuse at the Foundation, the Division was given a low rating last June by a

review committee that said PRA's clients found it "too academic ... technical ... timid ... voluminous ... too late." The review also concluded that the Division had a "questionable skill mix," a "weak relationship with NSF" and "little contact" with the NSF Director and NSF's policymaking body, the National Science Board. The following month, the Division's year-long period under an acting director came to an end with the appointment of a veteran policy analyst, Peter W. House, as Director.

Author of 11 books and numerous articles, House was running several major policy-analyses and assessments at the Department of Energy when he responded to a public advertisement for the NSF position. He says he and NSF Director Edward A. Knapp were previously unacquainted.

Since August, the Division has received and responded to numerous inquiries from Knapp, Presidential Science Adviser George A. Keyworth and the Office of Management and Budget. The subjects include:

The role of academic scientists in high-tech enterprise, techniques for evaluating scientific productivity, compensation for environmentally related injuries, the effect of "big science" spending on budgets for basic research, and the effect of the R&D tax credit.

Also: Calculating inflation rates for scientific research, factors determining the location of high-tech industry, and criteria to be considered among competing new scientific programs.

In what House describes as an effort to broaden the capabilities of the Division, NSF, in a notice last September 7 in *Commerce Business Daily*, invited policy-research organizations to describe their talents. Of the 150 that responded, House says, "15 seemed qualified," and will constitute a pool of contractors on whom the Division may call for specific jobs. (House says that the last time the Division reached out like that was about 10 years ago.)

The subjects on which they were invited to present their qualifications spanned wide areas in natural resources, environmental protection, information handling, industrial development, science and technology policy, and risk analysis.

GAO REPORT (Continued from page 1)

managers seeking ways to charge NIH for ongoing activities.

For the fiscal year that began on October 1, the Administration again sought to cut spending on indirect costs. But, egged on by university lobbyists, Congress again came to the rescue, and provided funds for full payment. But noting the ever-rising share of research funds going into non-research activities, even Capitol Hill's most stalwart friends of biomedical research are mixing expressions of concern with suggestions for restraint.

Among members of Congress who are involved with the indirect-cost issue, the forthcoming GAO report has aroused hopes for a reliable assessment of a confused and increasingly nasty problem.

Agencies receiving the report have 30 days in which to make comments. The tentative publication date of mid-December looks reasonable at this point.—DSG

©Science & Government Report, Inc., 1983

ISSN 0048-9581

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

Circulation Manager
Margaret Lee

Contributing Correspondents

Christopher Joyce (Washington); Francois Segulier (Paris); Ros Herman (London)

Independently published by *Science & Government Report, Inc.*, twice monthly, except in January, July & August. Annual subscription: Institutions, \$144.00 (two years, \$255.00). Information about bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. Nw., Washington, DC 20015. Tel. (202) 244-4135. Second-class postage at Washington, DC. Please address all subscription correspondence to Box 6226A, Northwest Station, Washington, DC 20015. Reproduction without permission is prohibited. SGR is available on Xerox University Microfilms. Claims for missing back issues will be filled without charge if made within six months of publication date.

Britain: After the Cuts, Still More Reductions

London. Britain's 44 full-fledged universities are facing new financial pressures from the Thatcher government, following a four-year stretch in which support declined by about 15 percent. This time, as Sir Keith Joseph, the Education and Science Minister, indicated in September, the aim is to reduce costs by cutting spending per student, rather than simply reducing enrollments.

In a letter to Sir Edward Parkes, the retiring Chairman of the University Grants Committee, which channels government money to the universities, Joseph asked the UGC to "consider the implications" of cutting support per student by 15 percent by 1990. The implied goal of more students without more funding is the government's response to middle-class resentment at a previous one-in-seven reduction in admission of students.

The news, coming at a time when it was widely assumed that the universities had done their share of economizing, was rendered even more disagreeable by Minister Joseph's recommendation that the universities shift admissions to accommodate more science and engineering students. Since studies in these fields are generally the costliest, the universities doubt that their problems are being regarded with sensitivity. There is talk of fighting back, but the opportunities for doing so are actually quite limited.

Previous pressures for shrinking Britain's academic enterprise have resulted in a mass of financially sweetened early retirements and redundancies, according to a recent report by the UGC, with the ultimate goal of a reduction of 4000 posts nearly half completed. These departures have so far cost about \$60 million, and will ultimately cost over \$100 million, in addition to the retirement pay that the ex-academics are entitled to.

"New Blood" Appointments

Academics in science and engineering have left more quickly than others, since their employability is relatively bright in Britain's anemic economy. Their departure has been somewhat compensated for by the influx of 312 young appointees under a "new blood" scheme that emphasizes teaching and research in information technologies.

The enforced belt tightening has evoked conflicting views about whether British science has been damaged or has actually benefited from the economic rigor of recent years. Lord Flowers, Rector of London's Imperial College, recently argued that the system is leaner and fitter today. But sympathizers with that cheery viewpoint are definitely in the minority. More common is the view of Sir John Mason, former head of the UK Meteorological Office and Chairman of the British

Association for the Advancement of Science. In a recent talk he painted a dismal picture of Britain's scientific standing, stating that "I believe we are losing our sharp competitive edge at the forefront of basic research." His appraisal of decline included fields in which Britain has excelled—solid state physics, electronics, computer science, and materials science.

A presumably influential source has recommended that universities respond to the difficulties that science is experiencing by giving scientists a larger role in university administration. The suggestion is contained in a report associated with the name of Sir Alec Merrison, former Chairman of the Advisory Board for the Research Councils (ABRC), an umbrella committee that advises the Department of Education and Science on the distribution of money among the five research councils that finance academic research. Merrison's report noted findings of a decline in resources and time devoted to research as hardpressed universities shifted staff and funds to teaching. And it recommended that researchers be given a voice at the senior level of university administration, perhaps through special research committees that could assess project priorities.

CERN Costs Going Up

The suggestion has aroused little interest in the universities, which do not care for outside advice on their internal governance. But the ABRC isn't dropping the matter. Recently, it has begun to work more closely with a group that is well connected to government research-policy affairs, the Advisory Committee for Applied Research and Development. Composed of academics and industrialists, this Committee is not attached to any particular ministry, but works closely with the Chief Scientific Adviser to the Cabinet, Robin Nicholson, and the Cabinet Office. In joint reports, the two committees have urged universities to establish research committees as recommended by Merrison. But neither the UGC nor the Committee of Vice Chancellors—comprising the chiefs of the 44 universities—have responded favorably.

The research councils that finance academic research have not been faring well. While the government continues to maintain level funding for research, the Science and Engineering Research Council (SERC), through which about half of all government basic research funds are channeled, has encountered serious trouble in paying Britain's subscription to CERN, the European Center for Nuclear Research, in Geneva. The strength of the Swiss franc has added an extra \$6 million to the cost, and, as there is no provision for buffering SERC against such fluctuations, the money will have to

(Continued on page 4)

...Still Pursuing Academic-Industrial Ties

(Continued from page 3)

be taken from other areas, including microelectronics and computer science. The CERN crisis also threatens some of Britain's long-dwindling "big science" projects, such as the Synchrotron Radiation Source and the Nuclear Structure Facility at Daresbury. Meanwhile, the Spallation Neutron Source at the Rutherford Laboratory, near Oxford, is about two years behind in construction because of a cash shortage. Experiments are expected to begin there in October 1984, and by the following year, SERC forecasts, it will be a world leader.

In the face of continuing financial strigencies, SERC is about to do battle with Whitehall's budget minders on a matter of historical affection and modern-day convenience. A review committee has recommended that SERC sell off the beautiful castle at Herstmonceux, in Sussex, that houses the Royal Greenwich Observatory, and that it also dispose of houses held by SERC to attract staff. SERC, which has been planning to use the castle as a conference center and for administrative offices for the observatory, is mobilizing to hold onto its properties.

Agriculture Research

Here, as in the US, agricultural research has recently drawn serious criticism and is headed for a shakeup. The central agency for supporting the UK's research in this area, the Agricultural Research Council (ARC), has drawn fire from a House of Commons Select Committee and from a quasi-governmental advisory body, the Joint Consultative Organization for Research and Development in Agriculture and Food. The ARC differs from the Science and Engineering Research Council in that most of its research is conducted in its own laboratories, with little or no connection to research and training in universities—an aloofness that is the basis for much of the criticism.

The same charge has been made against other research councils in a report presided over by Dick Morris, Chairman of the UK Branch of the American firm Brown and Root. The report, reflecting Morris's long campaign to promote closer academic-industrial ties, said that the research councils should henceforth locate all new research facilities at universities and in collaboration with university research departments, unless there are overriding reasons for not doing so. This is the current practice of the Medical Research Council, it was noted.

The report also recommended that the work of the councils' laboratories should be regularly scrutinized by committees that include academic researchers. The Morris Committee did not go so far as to complain that

the research councils are spending too much money in-house, a view widely held by Britain's financially pressed university scientists, but it did leave the impression that the councils would be well-advised to reconsider their priorities.

With growth out of the question in government support of the research councils, universities here are looking to industry to underwrite their ambitions. The trend is encouraged by government, both to relieve its own financial strains and as a means for pursuing Britain's eternally elusive goal of American-style intimacy between academic researchers and high-tech industry. In line with this aim, the government is teaming up with industry for joint financing of still another major venture in computer technology, the so-called Alvey program, fashioned by a committee headed by John Alvey, Director of Technology for British Telecom (SGR Vol. XIII, No. 7). With government providing some \$300 million, and industry scheduled to contribute \$225 million, the far-ranging program will involve industry, government, and academe in research on software engineering, man-machine interfacing, and various other electronic enterprises. The program has perhaps overambitiously been dubbed Britain's answer to Japan's vaunted fifth-generation computer project. But whatever the realities, the Alvey program is Britain's most serious effort to gain a place in the high-tech sweepstakes of information handling.

Mrs. Thatcher Takes a Role

The government's efforts to emphasize its commitment to industrial innovation reached a peak in mid-September when Mrs. Thatcher chaired a daylong meeting on the subject. She used the occasion to announce that the British Technology Group, a government agency that, under one or another title over the years, has been the chosen instrument for promoting industrial development of university research results, would no longer retain exclusive rights in this field. Long criticized for being slow and unimaginative, BTG will now have to compete with other venture groups interested in university-based research. It was also announced that venture groups would be invited into the government's own laboratories—some of which are among the best in the UK—to sniff out marketable ideas.

As can be seen, Britain does not lack reports and recommendations for getting greater economic mileage from its investment in research. The basic problem, many feel, is that financial support is inadequate for developing the critical masses necessary for competing with other technologically ambitious nations. This mat-

(Continued on page 5)

OTA Starts Major Study of Economic Transition

Amid considerable inhouse grouching about the scale, staffing and feasibility of the enterprise, the Congressional Office of Technology Assessment is setting up a new group for what may well be the costliest and most ambitious study of OTA's decade-long existence—a \$1.6 million, 18-month inquiry titled "Technology and the American Economic Transition."

Approved last summer by the Congressional Board that oversees OTA's operations, the study proceeds from the premise that the US and world economies "may be entering a period of transition which may fundamentally alter the origin of economic wealth in the US, and not simply passing through an ordinary business cycle..."

The study is said to have been formulated in consultation with a broad array of influential Congressional committees, prominent among them the Senate Budget Committee and the Commerce, Science, and Transportation Committee; in addition, six House committees are reported in the picture.

Serving in the key post of Executive Director of the study is a physicist-turned-policy-analyst, Henry Kelly, formerly with OTA as a fellow of the American Association for the Advancement of Science. Kelly, who holds a Harvard PhD, once served with the Arms Control and Disarmament Agency, and returned to OTA from the Department of Energy's Solar Energy Research Institute, where he was in charge of analysis and assessment. But old hands at OTA trace the genesis of the study and the appointment of Kelly to Lionel (Skip) Johns, head of OTA's Division of Energy Materials, and International Security, to whom Kelly will report.

As for ideological content or thrust to the study, there doesn't seem to be any—which is in line with OTA's just-the-facts mandate from its politically diverse

From the Proposal

The following excerpt is from the Office of Technology Assessment's project proposal on "Technology and the American Economic Transition":

The analysis will extend the conventional definition of "markets" by developing a series of explicit indicators of market expectations that may involve such things as environmental quality, greater equity in life expectancy, and a desire to achieve higher levels of employment. The indicators would serve as a set of specifications for engineering design groups that would be formed to assess how new technologies might be combined to meet these demands. Development of these indicators will, of course, be a difficult task in itself particularly since there is often no data available to measure progress in critical areas. We hope, however, to develop a set of indicators that all parties will agree are important even if there is disagreement about their relative importance. These disagreements will translate into different views of how the economy may behave.

The approach suggested has the advantage of being able to describe assumptions that must be made about markets and the use of new technologies in concrete terms. This specificity would be designed to help reviewers with a variety of backgrounds to evaluate the reasonableness of the results. It must be emphasized that while the technique proposed for our work is a "model" in the strict sense that it is a synthetic representation of reality, it is not our intention to develop an integrated computer model that can be exercised routinely in the way that econometric models are operated. We will, however, select one of the major national econometric models to use as a basis of comparison for our work and will attempt to explain the reasons for any disagreement between the results of the model and the economic behavior developed under the "ground up" technique that will form the basis of the OTA work.

BRITAIN

(Continued from page 4)

ter, too, is to be the subject of a report, in this case by the Cabinet Office, which is reviewing national research spending in response to a recommendation by a House of Lords Select Committee.

Meanwhile, the British Association for the Advancement of Science, taking a cue from its American counterpart, is preparing an "audit" of the financial status of research in the UK. The audit is virtually certain to demonstrate an inadequacy of funding. But with the economy still in recession, and the newly returned Thatcher government determined to cut government spending still further, the simple remedy—more money—is beyond reach.—RH

masters in Congress. Rather, the study seems to emanate from run-of-the-mill infighting over shares of OTA's resources, which amount to \$14.6 million this year.

As spelled out in a "project proposal" that, deliberately or not, is often mystifyingly opaque, the study will examine five major areas of economic activi-

(Continued on page 6)

AAU Starts Clearinghouse On Links with Industry

The Association of American Universities is setting up a Clearinghouse on University-Industry Relations, and invites persons with experience on either side to send along relevant materials such as contract forms, news clippings and so forth.

The AAU is the Washington-based trade association for 50 of the biggest American plus two Canadian research-laden universities. It undertook the clearinghouse task after Rep. Albert Gore (D-Tenn.) suggested that it draft ethical guidelines for the new wave of academic-industrial ties. Since AAU's hungry membership spans the ethical spectrum in ground rules for pursuit of industrial gold, Gore's suggestion was delicately bucked to a committee—which foreseeably denied the need for any guidelines.

It did, however, recommend establishment of a system to keep track of what's going on out there. The Clearinghouse, with the support of a three-year grant from the Pew Memorial Trust, is the result.

The Clearinghouse is directed by April Burke, an attorney formerly on the staff of the US Senate's Office of Legislative Counsel. Address: Clearinghouse on University-Industrial Relations, AAU, One DuPont Circle, Suite 730, Washington, DC 20036; tel. 202/466-5030.

OTA (Continued from page 5)

ty: "the built environment," food, communications and mobility, health services, and education and the use of leisure time. The project proposal states that defense is out of bounds—standard for OTA, which has been discouraged from putting a spotlight on that scandalous swamp. "Instead," says the proposal, "the analysis will rely on projections made by other organizations and treat the [defense] issue parametrically if there is significant disagreement. In effect, defense will be treated as an unexamined 'demand' placed on the economy that will need manpower, engineering talent, and materials."

Kelly said that hiring of heads for each of the five subject areas has nearly been completed and that membership of an advisory group for the study will soon be announced. In quest of outside groups that might take part in the study on a contract basis, Kelly has recently visited with a number of policy-analysis centers and groups at various universities, including Harvard, MIT, Stanford, UC Berkeley, the University of North Carolina, North Carolina State, and the University of Illinois, Urbana.

Chicago Gets Major Grant for Science-Curriculum Project

The Amoco Foundation has awarded the University of Chicago \$760,000 for the first year of a 6-year pre-college mathematics curriculum development program that may eventually cost around \$10 million.

The program, which is to get underway immediately, has been promoted by Izaak Wirszup, Professor of Mathematics at Chicago, a popular Congressional witness on the shortcomings of science and mathematics education in the US. While the National Science Foundation has a wad of new money this year to finance its return to science- and math-education programs (SGR Vol. XIII, No. 17), NSF tends to move slowly and cautiously in new undertakings.

The sum that Amoco is putting into the Chicago program is quite respectable for this type of work, even by federal standards. And, as a summary of the program points out, federal agencies have been absent from the curriculum-development field for several years and Chicago's effort "will thus begin at least two years ahead of any other curriculum development project that might develop."

The program calls for curriculum development for kindergarten through high school, along with teacher training.

In Print

Industry/University Research Relations: A Workshop for Faculty, proceedings of a meeting last April sponsored by the Society of Research Administrators in conjunction with NSF, contains seven papers citing various experiences, including some painful ones, in the new rush to R&D collaboration between the two sectors. (30 pages, no charge, from John Rodman, c/o Office of Sponsored Projects, University of Texas at Dallas, Box 830688, Richardson, Texas 75083-0688; tel. 214/690-2315.)

New from the Congressional Office of Technology Assessment: *Water-Related Technologies for Sustainable Agriculture in US Arid/Semiarid Lands* (412 pages, \$8.50, GPO Stock No. 052-003-00930-7) and *Quality and Relevance of Research and Related Activities at the Gorgas Memorial Laboratory* (93 pages, \$4.50, GPO Stock No. 052-003-009-25-1), available from Superintendent of Documents, USGPO, Washington, DC 20402).

Statement of ownership, management, and circulation of *Science & Government Report*, published 21 times per year at 3736 Kanawha St. N.W., Washington DC 20015; publisher and editor, Daniel S. Greenberg (same address). Extent and nature of circulation: Average number of copies each issue during preceding 12 months/actual number of copies of a single issue published nearest to filing date (October 15, 1983, 1300/1200); total number of copies printed, 1300/1200; paid circulation through dealers and carriers, street vendors and counter sales, 0/0; mail subscriptions, 878/890, free distribution by mail, carrier, or other means, 34/36; copies not distributed, 388/274; total 1300/1200.

'84—A Record Year for Federal R&D Spending

(Dollars in millions)

Function	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total	\$17,410	\$19,039	\$20,780	\$23,542	\$25,999	\$28,080	\$30,017	\$33,319	\$36,115	\$38,455	\$45,663
National defense	9,016	9,679	10,430	11,864	12,899	13,791	14,946	18,413	22,070	24,913	31,984
Health	2,069	2,170	2,351	2,629	2,968	3,401	3,694	3,871	3,869	4,249	4,356
Energy	759	1,363	1,649	2,562	3,134	3,461	3,603	3,501	3,012	2,580	2,306
Space	2,702	2,764	3,130	2,924	2,962	3,009	2,981	2,696	2,584	1,883	1,897
General science	749	813	858	974	1,050	1,119	1,233	1,340	1,359	1,492	1,720
Transportation	693	635	631	708	768	798	888	870	791	894	1,091
Resources & environment	516	624	683	753	904	1,010	999	1,061	965	927	788
Agriculture	313	342	383	457	501	552	585	659	693	747	748
Education, training, employment, and social services	236	239	255	230	345	354	468	298	228	220	226
International affairs	24	29	42	66	57	117	127	160	165	152	161
Veterans	85	95	98	107	111	123	126	143	139	158	159
Commerce and housing credit	51	65	69	71	77	93	102	106	104	107	91
Income security	71	72	48	55	67	57	77	43	32	42	43
Justice	35	44	35	30	44	47	45	34	31	33	42
Community, regional development	82	93	109	101	92	127	119	104	63	48	39
General government	9	12	12	13	20	23	22	22	10	10	12

Listed in descending order of 1984 budget authority. Data for 1974-77 are shown in obligations; data for 1978-84 are shown in budget authority. Data for 1983 and 1984 are estimates as shown in the 1984 budget published in January 1983.

SOURCE: National Science Foundation

Federal support for research and development is up by a "real" 13 percent for fiscal 1984, which began October 1, the National Science Foundation reports in its latest compilation of presidential budget requests and congressional actions.

With some appropriations bills yet to be acted on when the figures were assembled, the final accounting may differ somewhat from those in the accompanying table (which fails to reflect, for example, Congress's decision to boost the National Institutes of Health budget by about 10 percent, rather than the 3 percent sought by the President). But the essential fact is that the federal government is off on a big R&D spending spree.

The big gainer, of course, is defense, which registered a 28-percent increase over the 1983 budget for R&D. But general science—which comprises the National Science Foundation and the basic research functions of the Department of Energy—also fared well, going up by 15 percent.

Overall, basic research was increased by about 9 percent, bringing the total to \$6.4 billion.

The National Aeronautics and Space Administration was budgeted for a 22-percent increase for aeronautical R&D—an area that the Administration has excluded from its general rule that industrial R&D should be left

to industry. The boost is listed under "Transportation."

The report showing these figures, NSF 83-323, is available without charge from NSF, Division of Science Resources Studies, 1800 G St. Nw., Washington, DC 20550.

Subscription Form

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

☐ Renew my subscription; ☐ Check enclosed

☐ Enter my subscription; ☐ Please bill

Institutional subscribers: one year, \$144.00 ☐

two years, \$255.00 ☐

(Overseas airmail, \$25.00 per year additional.)

Name

Address

Zip

A Small Consolation for the Brookhaven Lab

With last rites about all that remains to be performed on the Brookhaven National Laboratory's languishing Colliding Beam Accelerator, the Department of Energy has come up with a small consolation prize—a heavy ion research facility for the shell-shocked Long Island laboratory.

As described to the House Science and Technology Committee October 19 by Alvin W. Trivelpiece, Director of DOE's Office of Energy Research, the ion facility would require "redirection" of \$5 million that had been appropriated for the laboratory's ill-fated ISABELLE program to upgrade its big particle accelerator. "Eventually," Trivelpiece said, "this heavy ion research complex could be combined with the existing ISABELLE tunnel to provide a relativistic heavy ion collider capability for nuclear physics research."

The hearing, which had a wake-like atmosphere to it, was called to get DOE on the record about where it plans to go next in attending to the financially ravenous appetites of the high-energy elite. But first, it was necessary to hear the Congressman from Brookhaven, Rep. William Carney, a low-ranking Republican on the Democratically controlled Committee, spell out in gory detail what everybody knew—that the high-energy physics community had for years been saying nice things about Brookhaven's plans and efforts to upgrade its aging accelerator.

What was left out of this sad tale was that the nods of approval from fellow physicists came in the good old pre-Reagan days when DOE's requests for priorities were invariably followed by insistences that all projects were equally important—and possibly essential to the survival of American civilization. Last January, following several repetitions of that number, Trivelpiece told

DOE's High Energy Physics Advisory Panel that "soft" recommendations were no longer welcome. In a letter to the Panel's Chairman, Jack Sandweiss of Yale, he observed that "it will not be particularly useful to have recommendations that we could do thus and so if we just had so much funding."

Rather, wrote Trivelpiece, if the American high-energy physics community wanted to remain in the forefront of the field, it would have to spell out "What are the most important high energy physics facilities for the United States to have, regardless of where they might go or how much they might cost?" After much anguish, the answer was that ISABELLE should be abandoned in favor of going on to a colossal Super Conducting Super Collider.

Rep. Carney noted that the High Energy Physics Advisory Panel had reviewed the Brookhaven program "in 1974, 1975, 1977, 1980, 1981, as well as the latest review. Prior HEPAP review panels have recommended funding of the research, development and construction of the colliding beam accelerator," he said.

Carney insisted that something must be wrong with a system that gives high marks, not to mention over \$200 million in construction funds, for a longrunning project, and then suddenly concludes that it's not worth continuing.

Trivelpiece and Sandweiss looked a bit embarrassed by these declarations. The few Congressmen attending the hearing knew that fate could easily cast them in the role being filled by their colleague from Brookhaven. But even though appetites for the scientific pork barrel are strong, the costs of high-energy physics have risen to the point where something has to be abandoned.

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second class postage paid
at Washington, D.C.

9999

Xerox-University Microfilms
300 N. Zeeb Rd
Ann Arbor MI 48106

